

Product Features

- GaN on SiC Broadband High Power Amplifier
- 20 ~ 500MHz Operation Bandwidth
- Power Gain 37dB min.
- 40W Typical. @ P3dB

Applications

- General Purpose



Package Type : DP-75

Description

The power amplifier module is designed for Broadcasting, Telecommunication, Medical and Other markets.

Operating frequency range is from 20 ~ 500MHz.

Gallium Nitride on SiC technology is used and attached on an aluminum sub carrier. Full in/out matching for broadband performance is already applied.

Improved thermal handling by patented technology.

Electrical Specifications @ $V_{CC} = 28V$; $T_c = 45^\circ C$; $Z_S = Z_L = 50\Omega$

PARAMETER	UNIT	MIN	TYP	MAX	CONDITION
Operating Frequency	MHz	20	-	500	-
Power Gain	dB	37	39	42	Pout 46dBm(Typ)
Power Gain Flatness	dBpp	-	± 1.0	± 2.0	Pout 46dBm(Typ)
P ₃ dB	dBm	45	-	-	20 ~ 100MHz
		46	-	-	100 ~ 500MHz
Input Return Loss	dB	-	-8	-6	-
Supply Voltage	V	27.5	28	28.5	-
Quiescent Current consumption	A	-	3.2	3.5	-
Current consumption	A	-	4.0	4.5	Pout = 46W(Typ), CW
On/Off Switching Time*	uS	-	4.0	5.0	On : TTL "Low"
					Off : TTL "High"(30mA@Disable)
Shut Down or Switch On/Off TTL Voltage**	V	0	-	0.5	On : TTL "Low"
		2.5	-	5.5	Off : TTL "High"

Note.

*. Gate On/Off : High speed switching

**. Drain On/Off : 500ms delay

Absolute Maximum Ratings

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Drain Voltage	V	-	30	-	VDS
Operating Case Temperature	°C	-10	-	80	Tc
Storage Temperature	°C	-30	-	90	Tstg
Vibration	MIL-STD-810G Method 514.6 ANNEX C				VI

Environmental Characteristics

PARAMETER	UNIT	RATING
Input RF Power	dBm	13
Supply Voltage	V	30
Load Mismatch Value	-	3 : 1 @all load phase

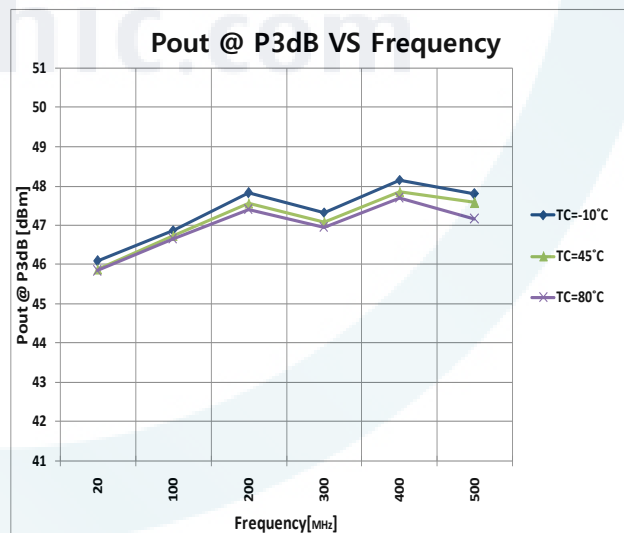
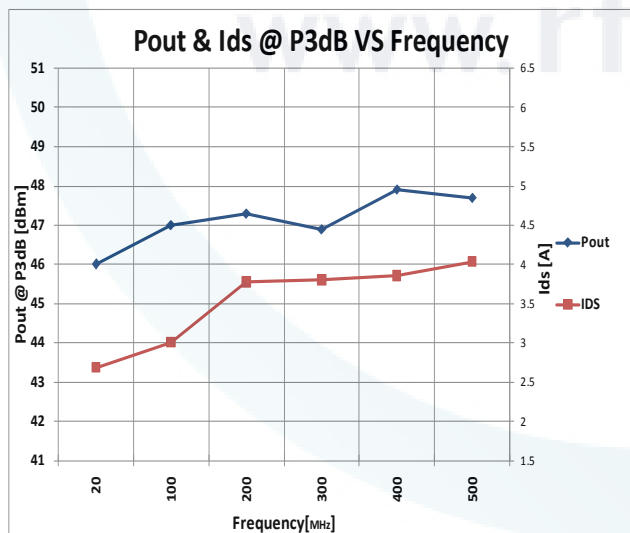
Ordering Information

Part Number	Package
RWP03040-50	Pallet
RWP03040-5H*	Module assembled with RWP03040-50

* RWP03040-5H is a SMA connectorized housing version of RWP03040-50. Electrical parameters are all same as RWP03040-50.
For more information, please contact RFHIC

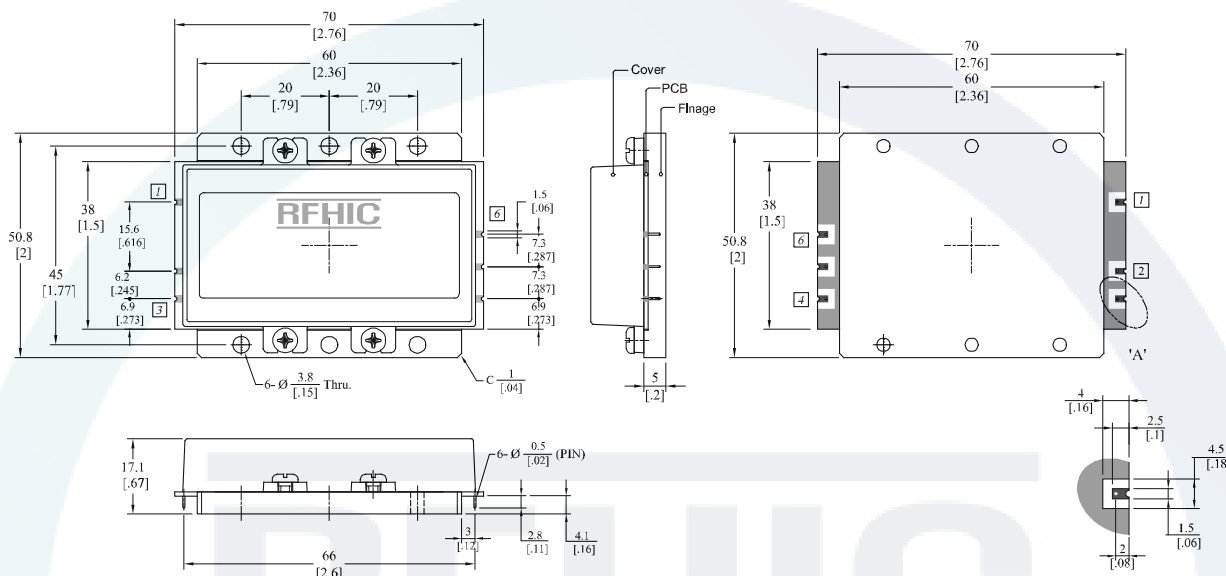
Mechanical Specifications

PARAMETER		UNIT	TYP
Dimension	Package	mm	70(L) x 50.8(W) x 17.1(H)
	Housing		90(L) x 75(W) x 25(H)
Weight	Package	g	75
	Housing		270
Housing RF IN/OUT Connector		-	SMA Female
Cooling		-	External Heat-sink



Package Dimensions (Type: DP-75)

* Unit: mm[inch] | Tolerance: ±0.2[.008]

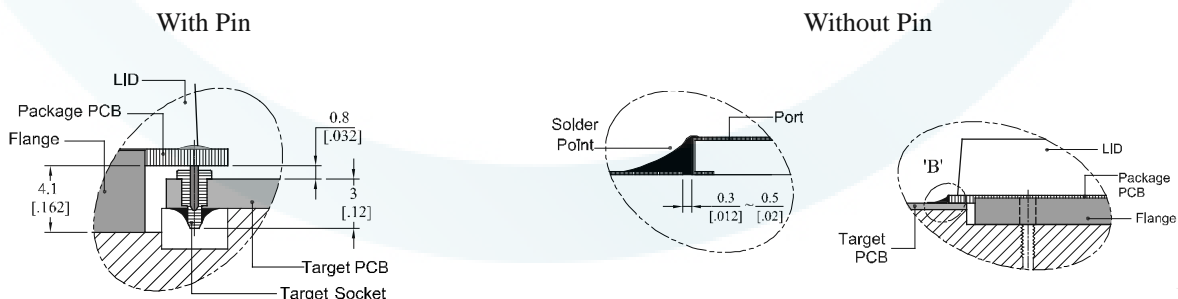


Pin Description			
Pin No	Function	Pin No	Function
1	RF IN	4	Switch ON/OFF
2	Vcc(+28V)	5	Temp Monitor
3	Shut Down(+5V)	6	RF OUT

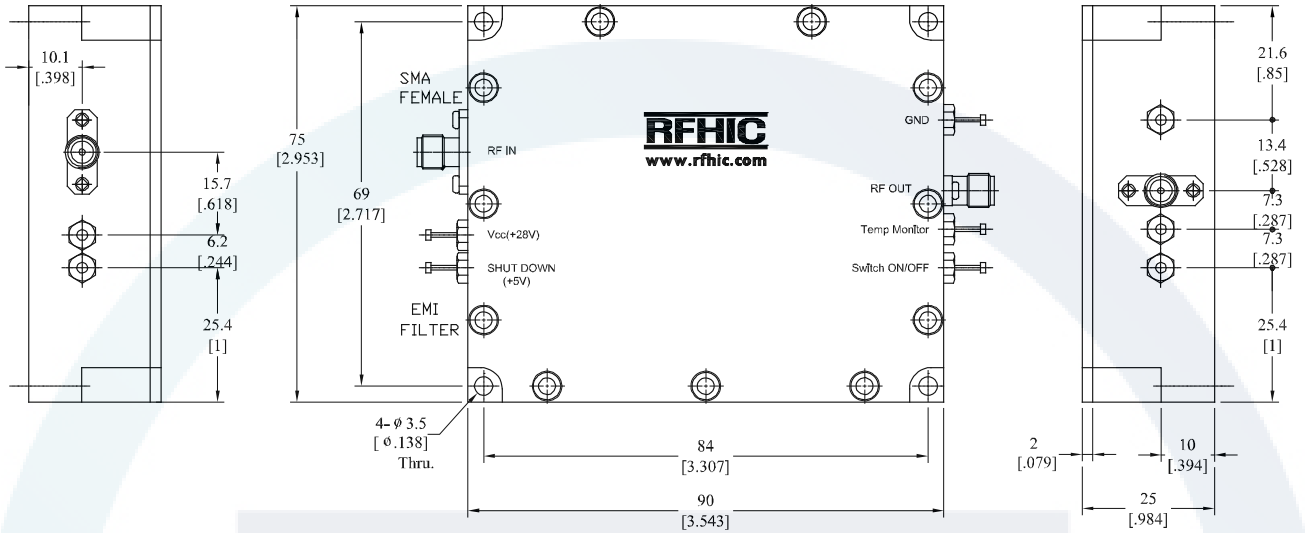
* Terminal Pin Information : ASK206091,AA (Acethink, Pin) , ASK20556,AA-1(Acethink, Pin Socket)

* Recommended Screw Torque : 8.0kgf.cm±1 using SEMS M3 10mm Bolt

How to connected the package to a target PCB



SMA Connectorized Housing Dimensions



Revision History

Part Number	Release Date	Version	Modification	Data Sheet Status
RWP03040-50	2015.11.10	1.9	Note	-
RWP03040-50	2015.1.15	1.8	Notice Change	-
RWP03040-50	2014.5.23	1.7	Condition & Graph modification	-



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